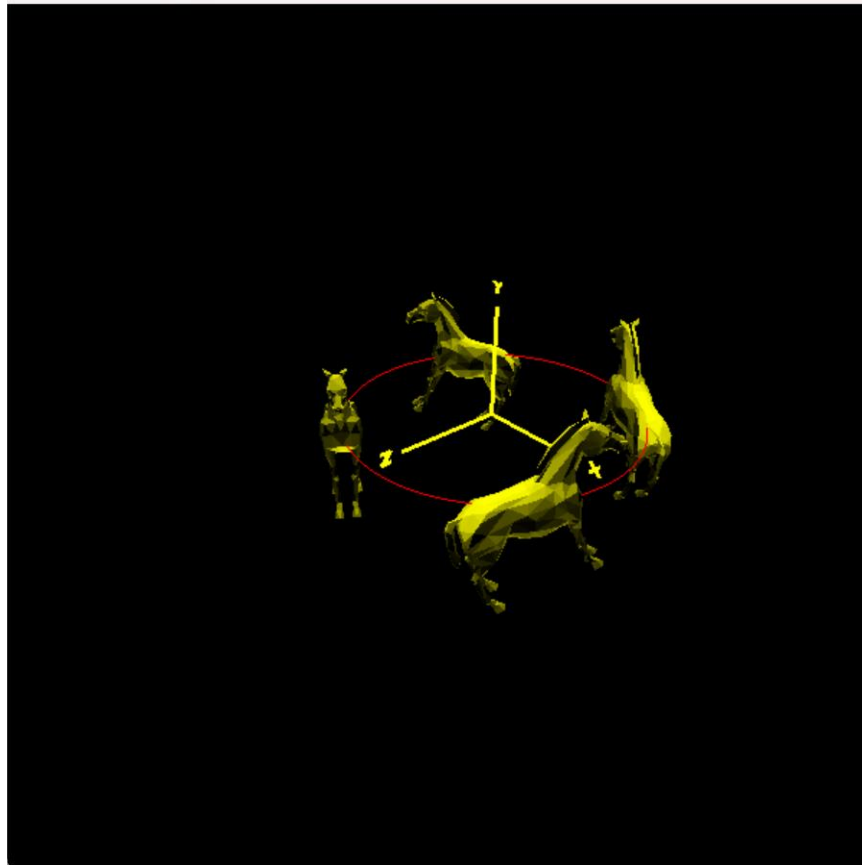


CS550 Assignment Two

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For this assignment, I split it into five steps to finish this assignment. First, I wrote a function to draw a red circle with 2.0f radius. Second, put the horse wireframe InitLists() function. Three, wrote a function in Animate() function. Set a rotation angle, increase the rotation angle by 0.5f. When the rotation angle is equal to 360, reset rotation angle. Let horse does rocking motion around red circle. We need to set a theta which is equal to $45.0f * \sin(2.f * (2.f * \text{Pi} * \text{Time}))$, and rotates the horse wireframe as theta. Four, create a inside view and outside view. Use gluLookAt() to set the position of the eye point, the position of the reference point, and the direction of "UP" view point. Let the user can switch the inside view or outside view, I need to create a DoViewMenu() function, and add this into InitMenus(). The last step, create a for loop to draw four horses. Because each horse is 90 degrees apart. So set the angle to $(i * 90 * (\text{pi} / 180))$. Translate the horses, we need to set the x and z. Through the angle between the horse and the center of the circle, we can use trigonometric functions to find the actual lengths of the horse on the x-axis ($r * \cos(\text{angle})$) and z-axis ($r * \sin(\text{angle})$) and the center of the circle.



Link: [CS550 Assignment Two - OSU MediaSpace \(oregonstate.edu\)](#)